

Appl. No. 10/708,619
Amdt. dated July 07, 2005
Reply to Office action of April 20, 2005

Amendments to the Drawings:

Figures 11 and 12 have been amended to include the following reference signs: 111 and 121. These changes correspond with the specification, and no new matter is added.

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Attachment:	Replacement Sheet	2 page(s)
	Annotated Sheet Showing Changes	2 page(s)

Appl. No. 10/708,619
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REMARKS/ARGUMENTS

Claims 1 and 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Uchida et al. (US 6,476,689).

5 Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al. (US 6,476,689) in view of Sakamoto et al. (US 5,612,656).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al (US 6,476,689) in view of Lo (US 6,114,925).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al (US 6,476,689) in view of Phillips, Jr. (US 6,483,400)

10 1. Rejection claims 1 and 9-12 rejected under 35 U.S.C. 102(b):

Claims 1 and 9-12 are rejected under U.S.C. 102(b) as being anticipated by Uchida et al. (US 6,476,689) for reasons of record as cited on page 3 of the above-indicted Office action.

Response:

15 Claim 1 has been cancelled and claim 2 has been amended to overcome this rejection.
Claim 2 now contains the limitations previously found in claim 1. First of all, Uchida et al. (hereinafter Uchida) teaches of a lowpass filter, and whereas the function of the claimed circuit is a transmission line. Therefore as cited on page 3 of the above-indicted Office action which describes Uchida's work as a lumped-element transmission line is an
20 incorrect characterization of Uchida's disclosure. Also, Uchida teaches that the mutual inductance between two inductors is chosen to be either positive or negative. Uchida does not teach that a positive mutual inductance can improve the frequency response of the lumped-element transmission line. For these reasons, the amended claim 2 is patentably

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distinct from Uchida, and reconsideration of claim 2 is respectfully requested.

Claim 9-10 are dependent on the amended claim 2, and should be allowed if claim 2 is allowed. Reconsideration of claim 9-10 are respectfully requested.

Claim 11 has been amended to be dependent on claim 2, as claim 1 has been cancelled.
5 Uchida does not teach that the first value obtained is to be equal to the mutual inductance. Instead, Uchida teaches that a gap is adjusted between coils for securing a space so that a capacitor plate can be inserted and disposed. For this reason, the amended claim 11 is patentably distinct from Uchida, and reconsideration of claim 11 is respectfully requested.

- Claim 12 has also been amended to be dependent on claim 2, as claim 1 has been cancelled.
10 Uchida does not teach the structure to be a 3-dimensional multi-layered structure having inductors, a capacitor, and vias penetrating the substrate and connecting different layers. Instead, Uchida teaches two coils embedded in a magnetic body and connected in series, and disposed in alignment in an axial direction. For this reason, the amended claim 12 is patentably distinct from Uchida, and reconsideration of claim 12 is respectfully requested.
- 15 2. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al. (US 6,476,689) in view of Sakamoto et al. (US 5,612,656) for reasons as cited on page 4 of the above-indicted Office action.

Response:

Claim 5 has been cancelled, claims 6 and 7 have also been subsequently canceled.

- 20 3. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al. (US 6,476,689) in view of Lo (US 6,114,925) for reasons as cited on page 4.

Claim 8 has been cancelled.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al.

Appl. No. 10/708,619
Amdt. dated July 07, 2005
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(US 6,476,689) in view of Phillips, Jr. (US 6,483,400) for reasons as cited on pages 4 and 5.

Claim 13 has been cancelled.

5. Introduction to new claim 14:

- 5 New claim 14 contains the limitation of a method of controlling attenuation in a lumped-element transmission line formed in a multi-layered substrate.

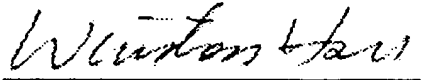
On the other hand, Uchida does not teach or suggest the prevention of attenuation at higher frequencies, where the circuit acts like a transmission line which maintains a low transmission loss over a wide frequency band. Also, Uchida does not teach that the positive mutual inductance is selected to be a larger value such that the total impedance connected to ground at the common node of the two series inductors is always negative and its magnitude increases with frequency for higher operating frequencies, therefore the attenuation of the circuit at higher frequencies can be reduced. Instead Uchida teaches that lowpass filter designs tend to give higher attenuation at high frequencies. Also Uchida does not teach that one may achieve an equivalent of a wideband, low-loss transmission line using lumped Ls and Cs so that the circuit size can be largely reduced. For these reasons, new claim 14 is patentable over Uchida. Acceptance of new claim 14 is respectfully requested.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

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Appl. No. 10/708,619
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Respectfully submitted,



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Winston Hsu, Patent Agent No. 41,526

5 P.O. BOX 506, Merrifield, VA 22116, U.S.A.

Voice Mail: 302-729-1562

Facsimile: 806-498-6673

e-mail : winstonhsu@naipo.com

- 10 Note: Please leave a message in my voice mail if you need to talk to me. The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.

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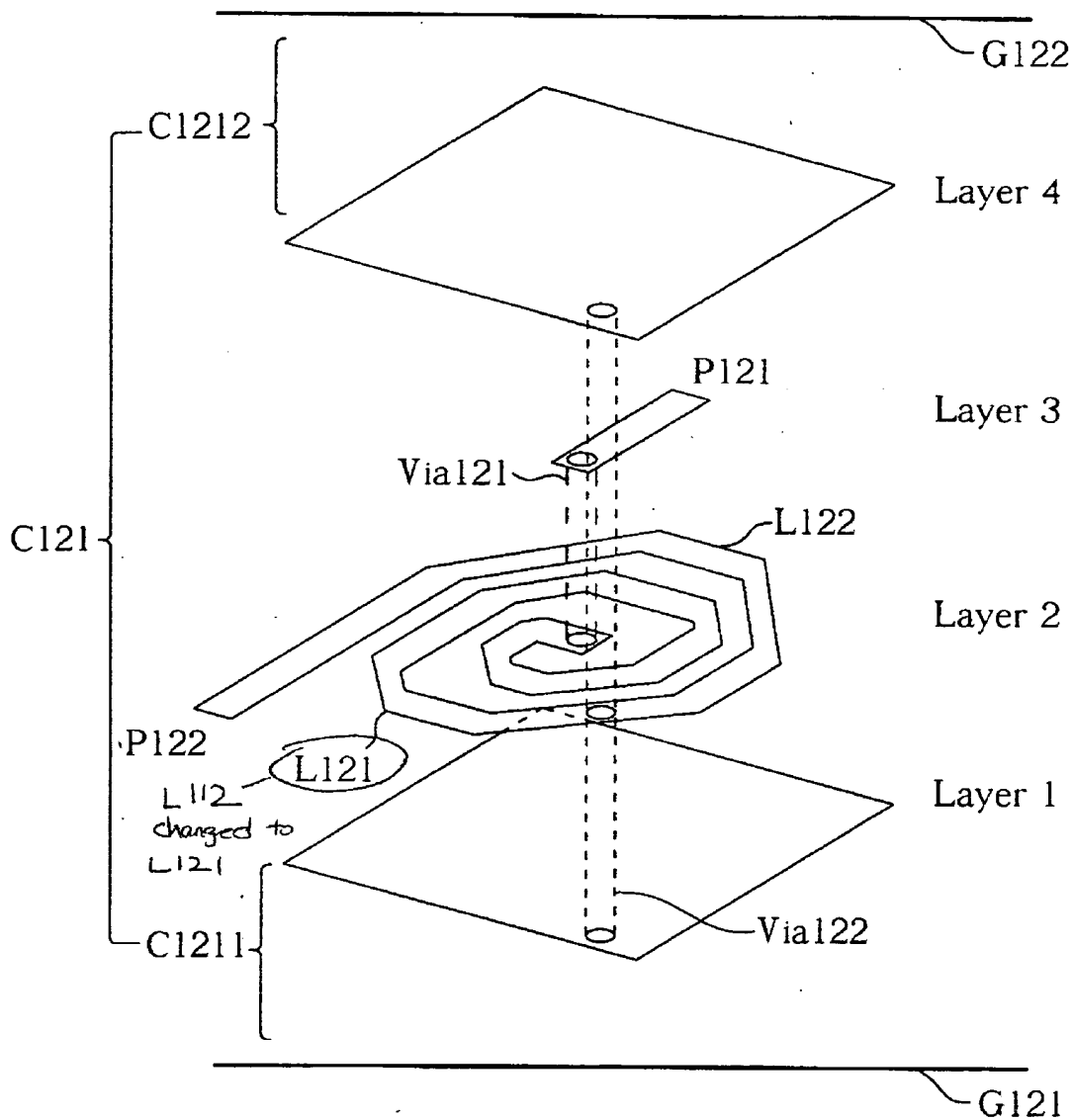


Fig. 12